

Applicant: Katsumi Sameshima
Serial No.: 09/451,979
Filing Date: November 30, 1999
Group Art Unit: 2814
Examiner: Wai Sing Louie
Page 2

AMENDMENTS TO THE CLAIMS:

1. (Previously Amended) A ferroelectric memory, comprising:

an insulation film having a concave portion at a top surface; and

a laminated body obtained by laminating a plurality of layers on said top surface and etching a region of said plurality of layers corresponding to a region other than said concave portion, wherein said laminated body includes a lower electrode layer which is made of a gel dry film and brought into contact with a bottom surface of said concave portion, a ferroelectric layer formed on said lower electrode layer and an upper electrode layer formed on said ferroelectric layer, wherein a portion of said lower electrode layer is only embedded in said concave portion, and protrudes outward from an inner peripheral edge forming said concave portion, and a side of said portion of said lower electrode layer, a side of said ferroelectric layer and a side of said upper electrode layer are flush with each other.

2. (Cancelled)

3. (Previously Amended) A ferroelectric memory, comprising:

an insulation film having a hollow at a top surface; and

a laminated body obtained by laminating a plurality of layers on said top surface and etching a region of said plurality of layers corresponding to a region other than said hollow, wherein said laminated body includes a lower electrode layer, a ferroelectric layer formed on said lower electrode layer and an upper electrode layer formed on said ferroelectric layer, and said lower electrode layer includes a first electrode portion formed by a sol-gel technique only at a corner of said hollow and a second portion formed on said first electrode portion.

4. (Currently Amended) A ferroelectric memory, comprising:

an insulation film having a concave portion at a top surface; and

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Page 3

a laminated body obtained by laminating a plurality of layers on said top surface and etching a region of said plurality of layers corresponding to a region other than said concave portion, wherein said laminated body includes a lower electrode layer which is brought into contact with a bottom surface of said concave portion, thin film of a same material as that of said lower electrode layer formed on a top surface of said lower electrode layer, a ferroelectric layer formed on said thin film and an upper electrode layer formed on said ferroelectric layer, and a side of said thin film, a side of said ferroelectric layer and a side of said upper electrode layer are flush with each other.

5. (Previously Amended) A ferroelectric memory, comprising:

an insulation film having a concave portion at a top surface; and

a laminated body obtained by laminating a plurality of layers on said top surface and etching a region of said plurality of layers corresponding to a region other than said concave portion, wherein said laminated body includes a lower electrode layer which is brought into contact with a bottom surface of said concave portion, a ferroelectric layer formed on said lower electrode layer and an upper electrode layer formed on said ferroelectric layer, wherein said lower electrode layer and said insulation film at respective top surfaces are planarized flush with each other, and a side of said ferroelectric layer and a side of said upper electrode layer are flush with each other.